

CLAIMS:

1. A method of making a curable rubber compound in which particulate cured rubber (crumb rubber) is mixed with curable base rubber and a corresponding curing system, characterised by inclusion of a curable base rubber low-viscosity component sufficient to wet the crumb rubber whereby a curable compound which can be roll-processed is formed.

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2. A method according to claim 1 in which to wet the crumb rubber a liquid curable rubber is combined with a non-liquid curable base rubber.

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3. A method according to claim 1 or 2 in which the non-liquid curable base rubber has a Mooney viscosity (ML1+4 @ 100°C) of from 30 to 80.

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4. A method according to any one of the preceding claims in which the crumb rubber particles are all less than 0.5 mm in size.

5. A method according to claim 4 in which the crumb rubber particles are all less than 0.25 mm in size.

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6. A method according to any one of the preceding claims in which the crumb rubber particles constitute at least 20% of the curable rubber compound.

7. A method according to claim 6 in which the crumb rubber particles constitute at least 30% of the curable rubber compound.

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8. A method according to any one of the preceding claims in which the curable rubber compound contains not more than 15 wt% inert filler.

10 9. A method according to claim 8 in which the curable rubber compound contains not more than 5 wt% inert filler.

15 10. A method according to any one of the preceding claims in which the crumb rubber is recycled rubber.

11. A method according to claim 2, or any claim dependent thereon, in which the liquid rubber and crumb rubber are separate from one another at least immediately 20 before their respective addition to the mix.

12. A method according to claim 2, or any claim dependent thereon, in which the amount of liquid curable rubber used is at least 5 phr.

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13. A method according to any one of the preceding claims including forming the curable rubber compound into a coherent self-sustaining web between rollers.

14. A curable rubber compound, processable or processed by one or more methods selected from roll-processing, extrusion and flow moulding, obtainable by a method  
5 according to any one of claims 1 to 13.

15. A compound according to claim 14 in sheet form.

16. A method of making an article comprising curing a  
10 compound according to claim 14.

17. A method according to claim 16 in which the compound is cured with heating in a compression mould.

15 18. A method of claim 15, 16 or 17 comprising as a preliminary stage the preparation of the curable rubber compound by a method according to any one of claims 1 to 13.

20 19. A method according to any one of claims 16 to 18 in which the article is in layer form.

25 20. A method according to claim 19 in which the article comprises a layer of the rubber compound and a superimposed layer of fabric.

21. A method according to claim 20 in which the fabric is tufted.

22. An article consisting of or comprising crumb rubber-filled cured rubber, obtainable by a method according to any one of claims 16 to 21.

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23. A mat or flooring material comprising a textile layer bonded to a rubber backing layer, the rubber backing layer comprising a uniform dispersion of cured rubber particles in a matrix of a cured second rubber, the cured rubber particles constituting at least 20 wt% of the rubber backing layer.

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24. A mat or flooring material according to claim 23 in which the textile layer is tufted.

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25. A mat or flooring material according to claim 23 or 24 in which the cured rubber particles have less than 0.25 mm particle size.

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26. Mat or flooring material according to any one of claims 23 to 25 in which the cured rubber particles are recycled rubber.

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27. Mat or flooring material according to any one of claims 23 to 26 in which the cured rubber particles and the matrix rubber include rubbers of the same type, selected from NBR, SBR and NR.

28. A mat or flooring material according to any one of claims 23 to 27 in which the rubber backing layer is from 1 to 20 mm thick.

5 29. A mat or flooring material according to any one of claims 23 to 28 in which the density of the rubber backing layer is not more than 1.2 g/cm<sup>3</sup>.

10 30. A method of making a mat or flooring material according to any one of claims 23 to 29 in which a roll-processed layer of uncured rubber compound, comprising a coherent web comprising the cured rubber particles dispersed in the uncured second rubber, is joined to the textile layer under heat and compression in a mould to 15 cure the second rubber.